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No. 07-1120

IN THE
Supreme Court of the United States

TOYOTA MOTOR CORPORATION,
TOYOTA MOTOR NORTH AMERICA, INC., and
TOYOTA MOTOR SALES, U.S.A., INC.
Petitioners,

v.

PAICE LLC,
Respondent.

On Petition For A Writ Of Certiorari To The United States Court Of Appeals For The Federal Circuit

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BRIEF IN OPPOSITION FOR PAICE LLC

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COUNTER-STATEMENT OF THE QUESTION PRESENTED

1. Whether the U.S. Court of Appeals for the Federal Circuit erred in refusing to overturn a jury verdict of infringement, where Toyota's evidence in support of its assertion that Paice disavowed patent coverage to which it otherwise had a right was, in the appellate court's language, "equivocal at best"?

CORPORATE DISCLOSURE STATEMENT

Paice LLC is a privately-held company. Paice has no parent company, and no publicly held company owns 10% or more of its stock.

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COUNTER-STATEMENT OF THE CASE

A. Introduction

This is a simple patent case in which the jury found that Petitioner Toyota infringed Paice's patent, and neither the district court nor any member of the Federal Circuit panel saw reason to disturb the jury's factual finding. In particular, the courts rejected Toyota's argument that a person skilled in the art would read Paice's patent as disavowing coverage of a broad range of technical solutions, when the patent made no such broad-based distinction. The courts could find no clarity in Toyota's assertion that Paice had disavowed its rights, and thus rejected that position. In its effort to secure review from this Court, Toyota dresses up that simple ruling as a "reverse presumption," but it is, in fact, nothing more than an application of the straightforward requirement that Toyota, as advocating for a disavowal of property rights that otherwise belong to Paice, actually support its position.

Toyota failed to establish that position—to the jury, to the district court, or to any member of the Federal Circuit panel. It is thus left here with name-calling—spending paragraphs wrongfully tagging Paice as a patent "shark," when such derogations are irrelevant to the issue on appeal, and it was Toyota that was caught in squaline posture feeding on Paice's technology.

B. Paice's Invention And Patent

Paice's invention is a pioneering development in hybrid automotive technology—termed "hybrid" because the technology mixes power from a traditional internal combustion engine (ICE) with that from one or more electric motors. The trick to making hybrid vehicles efficient is to run the ICE only at optimal loads (e.g., not at stop lights), and to blend the power from the ICE with the power from the electric motor(s) smoothly and efficiently across a wide range of loads.

Paice's invention permits such operation by using a computerized control system to optimize the mix of power delivery through the system in response to sensed loads on the system. Pet. App. 3-5. The invention also uses a powerful electric motor that receives energy at high voltage and low current, to increase the efficiency of the system. The use of high voltage and low current ran contrary to conventional wisdom, which kept voltage low for perceived safety reasons, and thus required high current to achieve adequate power. Pet. App. 7-8.

This work by Paice happened early—the application for the patent-in-suit was filed in 1992. The patented invention was such an advance in the art that the patent issued without the examiner ever rejecting the patent claims, and without any need by the inventors to narrow the claims by amendment.[1]

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[1] This Court addressed the effect of narrowing amendments on the doctrine of equivalents from

C. The Parties And Their Relationship

Paice was formed by Dr. Alex J. Severinsky, whose work was ahead of its time, but has now found mass commercial acceptance. From its inception, the company—whose name is an acronym for "Power-Assisted Internal Combustion Engines"—has been engaged in developing hybrid electric vehicle technology to promote fuel efficiency, lower emissions, and superior driving performance. Early in its existence, Paice was accepted into the University of Maryland incubator program, a program created to support promising start-up companies. Resp. App. 9-10. The great promise of Paice's technology led several senior executives from U.S. auto companies to assist Paice, and drew more than $19 million in investment from the Abell Foundation, a private foundation in Baltimore dedicated to (among other things) decreasing our dependence on foreign oil and reducing pollution.

Toyota came along later. It did not decide to investigate developing a commercial hybrid vehicle until November 1994, two years after Paice had filed its patent application. Resp. App. 29-30. Toyota initiated its first project for mass produced hybrid vehicles in late 1995, after the patent-in-suit had issued,

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narrowing amendments in *Warner-Jenkinson Co. v. Hilton Davis Chemical Co.*, 520 U.S. 17 (1997) and *Festo Corp. v. Shoketsu Kinzoku Kogyo Kabushiki Co.*, 535 U.S. 722 (2002). There are no *Warner-Jenkinson* or *Festo* issues in this case because the claims here were never amended.

and introduced the resulting car as the "Japanese Prius" in 1997.[2] Toyota introduced its "Prius I" into the U.S. in 2000. Both the Japanese Prius and the Prius I used low voltage (273.6V) and high current (120.6A at 33 kW) to power the primary electric motor called a "traction motor," and had not yet adopted the high voltage teaching of the Paice's patent. The Prius I was not a commercial success and Paice did not sue for infringement by this design.

Soon after Toyota released the Prius I, Paice invited Toyota to attend a demonstration of its technology's proof-of-concept, which had significant improvements over then-available hybrid systems. Resp. App. 13-14. Toyota found no cause for name calling then, and instead expressed its belief that there would be "extensive interest" in Paice's hybrid technology, but declined to meet. Resp. App. 15-16. Paice later sent Toyota copies of its issued patents and encouraged Toyota to reconsider. Resp. App. 17-18 and 27-28. Toyota acknowledged its belief that Paice had "made great developments in the hybrid field," but again declined because it had "no intentions of developing [Paice's] technology." Resp. App. 19-20. Soon after, Toyota agreed to meet with Paice in Japan, but canceled the meeting the evening before.

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[2] Toyota's attempt to recast Paice as a "patent shark" simply ignores the history of this matter—that Paice's patent issued, and Toyota knew about it, before Toyota first introduced a hybrid vehicle..

The pattern was repeated in 2002, with Paice sending Toyota a copy of an industry presentation and proposing a meeting, and Toyota acknowledging that Paice's system had "excellent performance," but still refusing to meet. Resp. App. 24-26. Paice sent another patent to Toyota in 2003 and encouraged Toyota to take advantage of the significant benefits of Paice's technology. Again, Toyota refused to meet.

Toyota's introduction of its second-generation system, the Prius II, in late 2003, led to this lawsuit. A 2004 Environmental Report issued by Toyota described how the car's powertrain had been completely redesigned, and how the car had adopted high voltage—straight out of Paice's patent:

> We completely abandoned the original concept of the Prius and started with a blank slate to create a new concept . . . . In order to improve the driving performance of the Prius, its powertrain was completely redesigned. In the case of the new Prius, by starting from scratch, we were aiming at a substantial improvement in driving performance.
>
> * * * *
>
> This new system also used a boost converter that amplified the voltage and lowered the current the battery sent to the motors, which improved performance yet kept the bulk and cost of the system to a minimum.

Resp. App. 21-23. Toyota explained the efficiency enhancement of higher voltages in its marketing materials for the Prius II:

> The high-voltage power circuit is a new technology that supports the new [Prius II] system. By providing a newly developed high-voltage power circuit inside the power control unit, the voltage of the motor and the generator has been increased from 274V in [Prius I] to a maximum of 500V in [Prius II]. As a result, electrical power can be supplied to the motor using a smaller current, thus contributing to an increase in efficiency.

Toyota also greatly improved the control systems in the Prius II in a manner that also matched Paice's technology. "The system control of [Prius II] monitors . . . various energy consumption statuses of the vehicle in real time and provides precise and fast integrated control so that the vehicle can be operated safely and comfortably at the highest possible efficiency." Toyota announced that this change "revolutionized" its control systems.

The controversy surrounding this 180 degree shift in Toyota's view of Paice's technology also underscores the ingenuity of Paice's high voltage, low current teaching, as reported in Toyota's 2004 Environmental and Social Report, in a "Special Story" about the new Prius:

> The adoption of a high-voltage power-control system was the key. A method of increasing motor output by increasing voltage is nothing new. As a matter of fact, such a method is routinely used in industrial machines and trains. However, even though the development team knew that such a technology existed, the idea of incorporating it into an

> automobile did not easily occur to them . . . . Although the development team members knew that a high-voltage power control system would improve performance, they were not sure whether they could develop a system that would fit in the limited space of a motor vehicle. This point was hotly debated during many meetings.

Resp. App. 21-23.This new platform introduced by Toyota was an immediate and huge success—soon incorporated into Toyota's Highlander and Lexus RX400h SUVs. Between June 2004 and August 2005, Toyota sold in the United States over 131,000 vehicles that used the new system—more than the earlier Prius I system had sold in six years. And, in Toyota's own words, "[t]he adoption of the high-voltage power control system was the key."

Thus, although hybrid car technology had been around in concept for over seventy years, it did not take off until Toyota revamped its vehicle program using technology that Paice patented almost 10 years earlier, and that Paice had been advocating and offering to Toyota's executives for years. Determined not to let others take the benefits of its inventions without compensation, Paice filed suit on June 8, 2004.

D. The District Court Proceedings

Toyota's defenses at trial for the claims that are the subject of this petition were reduced to a single claim limitation: the "controllable torque transfer unit" (CTTU), which managed the manner in which torque was delivered from the gas engine and electric mo-

tor. From the outset, Toyota sought to convince the district court that this term should be limited to the particular preferred embodiment in the patent, even though the patent explicitly noted that the embodiment was merely one example. The court rejected Toyota's position, and construed the CTTU broadly as "a multi-input device or component that is controlled to transfer variable amounts of torque (rotary force)." Resp. App. 2-7.

At trial, Paice's expert, Dr. Steven P. Nichols, took Toyota's accused planetary gear unit apart in explaining its operation, and how it had the same function, way, and result as did the patent claims (the "function, way, result" test being one way in which to establish equivalence). He indicated that Toyota's unit acted as a CTTU:

> Q: Dr. Nichols, could you summarize for us how that is that the planetary gear unit that you've disassembled for us acts as a [CTTU], within the meaning of the '970 patent?
>
> A: Sure. Let's use this one. It allows . . . the computer to control variable amounts of torque output and control the sources from which that torque comes. So, as an example. If the automobile is standing still, we got in this morning, we turned it on, the computer decides the battery is low, it will turn MG1 that starts the engine. At the same time in order [that] the car didn't lurch forward, they lock the planetary gear unit by using MG1-MG2 to lock it. You can run this with — after you start the engine, by the way, the engine is running, you see MG1 turning, your

> driving power, none of that energy is getting to the wheels right now . . . . So, you can choose your source of power, you can choose your flow of torque and without getting into too fine a hair on the definition of controllable torque transfer unit, I think we will look at that later, I think that will come into play as we close that out.

Resp. App. 11-12.From all this, Dr. Nichols summarized how the claimed CTTU and Toyota's planetary gear unit had the same function, way, and result, and why they were substantially the same under the doctrine of equivalents:

> A: My understanding of the Doctrine of Equivalents is that even though an element has not been literally met, it can still infringe under the Doctrines of Equivalent [sic] if it – if it provides substantially the same function in substantially the same way for substantially the same results.
>
> Q: So, assuming that the [CTTU] is not literally infringed, have you found that the [CTTU] — excuse me — the accused vehicles satisfy this limitation under the Doctrine of Equivalents?
>
> A: Yes, it is my opinion that they do.
>
> Q: Could you — could you describe that for us by reference to the slide that we see on the screen, slide 71 ?
>
> A: Well, this particular slide is the Doctrine of Equivalents analysis for the [CTTU]. I will say that I do believe that it is literally

> there. However, it provides the function that is to be provided. It provides controllable and variable amounts of torque from two sources to the drive wheels, and I believe that's consistent with the construction of the Court. The way in which it does that is it controls a set of gears to receive torque from two input shafts and transfer torque to the drive wheels.
>
> Q: And what's the result?
>
> A: The results are control — that the vehicles control to direct torque flow between the motor, the engine and the drive . . .

Pet. App. 21-22. Although Toyota had failed in its attempt to have the district court limit the claims to the patent's preferred embodiment (both as part of claim construction and later on summary judgment), its expert tried the same, and refused to consider the claims without reading such a limitation into them.

The jury, however, found the claims subject to Toyota's petition valid and infringed—literally as to all elements except the CTTU, which was found to be present under the doctrine of equivalents. Toyota has not challenged the finding that, from a technical standpoint, the two systems are equivalent. The district court upheld the verdict, rejecting Toyota's arguments that there was inadequate testimony about equivalence, and that Paice had disavowed the use of a planetary gear unit as a CTTU. The district court, however, refused to enjoin Toyota, and instead entered a modest $25 per car royalty based on the amount for past damages that had been determined by the jury.

E. The Federal Circuit Ruling and Denial of Rehearing *En Banc*

Among the many issues Toyota raised on appeal was one it had made unsuccessfully to the district court in claim construction, in its motion for summary judgment, and in requests for post-trial relief—i.e., that comments contained in the body of the patent discussing certain prior art patents to an inventor named Berman somehow amounted to a disavowal of using a planetary gear unit as the CTTU. The dispute was not over what law the Federal Circuit should apply (which is Toyota's position now), but whether the supposed disclaimer was clear enough that a skilled artisan in the relevant field would conclude that Paice had impliedly disavowed patent coverage to which it otherwise had a right.

The full text of the supposed disavowal in the patent says nothing about the planetary gear unit in Berman, but simply discusses the "complexity, cost and difficulty" of Berman's use of two separate modes of control, with operator intervention to "control the transition between the several modes of operation":

> The present invention relates to such a parallel hybrid vehicle, but addresses certain substantial deficiencies of the Berman et al. design. For example, Berman et al. show two separate electric motor/generators powered by the internal combustion engine to charge batteries and to drive the vehicle forward in traffic. This arrangement is a source of additional complexity, cost and difficulty,

> as two separate modes of engine control are required, and the operator must control the transition between the several modes of operation. Further the gear train shown by Berman et al. appears to be quite complex and difficult to manufacture economically. Berman et al also indicates that one or even two variable-speed transmissions may be required.

Pet. App. 30-31. This commentary has nothing to do with the fact that Berman's overall gear train included a planetary gear unit. Note that Toyota ignores the electric motors, internal combustion engine, batteries, and control elements which are actually mentioned in the above passage, although again, no particular designs are disclaimed. The fact that the preferred embodiment—which itself is a form of planetary gear unit—was simpler and cheaper than Berman's gear train was not a disclaimer of planetary gear units generally. This is particularly evident because the patent also praised Berman's approach as "promising," and one that carried out the function of the CTTU—i.e., to combine torque from an ICE and a motor "so that both can provide torque directly to the wheels":

> A more promising 'parallel hybrid' approach is shown in [] Berman et al. In Berman et al an [ICE] and an electric motor are matched through a complex gear train so that both can provide torque directly to the wheels.

The Federal Circuit thus concluded that Paice had distinguished Berman, not because it used a planetary gear, but because Paice's invention (and Toy-

ota's accused system) used a computer-based selection system to overcome the problems of Berman's manual selection system:

> As the written description of the '970 patent reveals, the primary disadvantage of the Berman/TRW design is its control system, which relies upon a human operator to select the mode of operation. Paice overcame this disadvantage by using a microprocessor to determine the most appropriate mode of operation based on its monitoring of control inputs from the driver, as well as several other variables. Toyota's drive trains use a microprocessor in the same manner as the '970 patent, i.e., the microprocessor determines the most appropriate mode of operation based on its monitoring of control inputs form the driver, as well as several other variables. Therefore, the '970 patent's discussion of the Berman/TRW design's disadvantages does not preclude the application of the doctrine of equivalents to Toyota's accused transaxle units.

Pet. App. 34-35. The Federal Circuit also noted that Paice's discussion of the complexity of the Berman system was clearly secondary and "equivocal at best," and thus insufficient "to overturn the jury's finding of infringement." *Id.* The full Federal Circuit denied Toyota's *en banc* petition, without a comment or dissent by any of the twelve active judges.

REASONS FOR DENYING THE PETITION

A. Toyota Identifies No Basis For Review

This is an ordinary patent case, involving a case-specific application of the doctrine of equivalents, that does not fit any of the examples of compelling reasons for a writ of certiorari given in this Court's Rule 10. There is no circuit split, and there has been no disagreement within the Federal Circuit itself over the question Toyota presents. Toyota also fails to identify any discussion of the issue in academic journals, in any portion of the many pieces of proposed patent reform legislation now pending in Congress, or in any reports from the government or industry groups.

The issue Toyota raises, in fact, has nothing to do with any doctrine of equivalents issue that has caused debate at the Federal Circuit, or with any of the issues discussed in the authorities on which Toyota relies. (The closest cases relate to *Warner-Jenkinson* or *Festo*, which are discussed below, and which involved clear surrenders from narrowing amendments, where the clear surrenders led to presumptions against the patentee.) Finally, the petition does not present a decision on an important question of federal law or on an important federal question, see id. 10(c), or relate to any other reason for review, see id. 10(a), (b).

Simply put, there is no issue here that demands this Court's time and attention. Toyota's argument is ultimately based on multiple false premises, which we discuss next.

B. Toyota's "Reverse Presumption" Is A Fiction Created to Secure Certiorari

Toyota's argument on appeal is that the Federal Circuit has created an unprecedented "reverse presumption" against disavowals of subject matter by patent applicants, but nothing so sinister is going on here. Rather, the Federal Circuit's case law merely requires a party seeking to overturn a jury verdict to articulate a fair reason to do so. More particularly, any party arguing that a patentee has taken an out-of-the-ordinary step, such as by giving up patent coverage to which it would otherwise be entitled, must explain how such an action occurred.

Requiring a party challenging a jury verdict to provide clarity in explaining why the verdict should fall makes perfect sense and is supported by deep precedent. The doctrine of equivalents is a fact issue, and as with all fact issues, should not be overturned lightly. *Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*, 339 U.S. 605, 609-10 (1950). That is particularly true where the issue turns on the nuances to be given to technical arguments that are central to the jury-assigned determination of whether the invention described in the patent either is, or is not, insubstantially different from the accused product and thus triggers the doctrine. *Id.* at 610 ("Particularly is this so in a field where so much depends upon familiarity with specific scientific problems and principles not usually contained in the general storehouse of knowledge and experience."). Thus, there is nothing "reversed" about the Federal Circuit's approach, nor has the court created a "presumption"—

it has simply followed the established requirement that a party provide a very good reason to eliminate a jury finding.

The Federal Circuit's approach is also consistent with the presumption, stated many times by this Court, against finding a party to have made a forfeiture of some property or right. *See, e.g.*, *Fuentes v. Shevin*, 407 U.S. 67, 94 n. 31 (1972); *Ohio Bell Tel. Co. v. Pub. Utils. Comm'n of Ohio*, 301 U.S. 292, 307 (1937); *Aetna Ins. Co. v. Kennedy*, 301 U.S. 389, 393 (1937); *Gonzales v.* Ross, 120 U.S. 605, 622 (1887). In the present context, the forfeiture would be the disavowal, by statements in a patent, that the patentee would otherwise have the right to cover under the doctrine of equivalents.

Indeed, the Federal Circuit's analysis follows from its ever-consistent approach of attempting to determine how a skilled artisan in the relevant field would interpret the patent. *Wang Labs., Inc. v. America Online, Inc.*, 197 F.3d 1377, 1383-84 (Fed. Cir. 1999) (finding a disavowal after looking to the understanding of a "person of skill in this field reading" the patent file); *Vehicular Technologies Corp. v. Titan Wheel Int'l., Inc.*, 212 F.3d 1377 (Fed. Cir. 2000) (finding a disavowal after looking to how "inventors and artisans of ordinary skill" would interpret the patent); *see also Moba v. Diamond Automation, Inc.*, 325 F.3d 1306, 1315 (Fed.Cir.2003) ("Moreover, as this court has repeatedly counseled, the best indicator of claim meaning is its usage in context as understood by one of skill in the art at the time of invention."). Because a patent typically discusses what the invention is, rather than what the

invention is not, it is perfectly reasonable to conclude that a skilled artisan or competitor would not require a party to identify such a negative teaching clearly. By viewing the patent through the eyes of a skilled artisan (or, by extension, a competitor of the patentee), the Federal Circuit ensures that the notice function of patent claims is preserved. *CAE Screenplates Inc. v. Heinrich Fiedler GmbH & Co.* KG, 224 F.3d 1308, 1319 (Fed. Cir. 2000) ("The purpose of prosecution history estoppel is to protect the notice function of claims, 'measured from the vantage point of what a competitor was reasonably entitled to conclude.'").

The Federal Circuit's approach also properly resists attempts to let infringers avoid liability based solely on legal formalisms. As this Court has explained, the doctrine of equivalents is designed to prevent accused infringers from avoiding a patent by making insubstantial technical changes to avoid literal application of a patent's claims to their product. *See Graver Tank & Mfg. Co. v. Linde Air Prods. Co.*,339 U.S. 605, 607 (1950). The Court also emphasized the continuing vitality of the doctrine in *Warner-Jenkinson*, and indicated that the doctrine is inherently multi-factored:

> What constitutes equivalency must be determined against the context of the patent, the prior art, and the particular circumstances of the case. Equivalency, in the patent law, is not the prisoner of a formula and is not an absolute to be considered in a vacuum.

520 U.S. at 24-25 (quoting *Graver Tank*, 339 U.S. at 609); *cf. Astrazeneca AB v. Mutual Pharmaceutical Co.*, 384 F.3d 1333, 1340 (Fed. Cir. 2004) (noting that identifying a disavowal does not require "rigid formalism," such as an express identification of what the invention does and does not cover). There is simply no basis here to conclude, as a matter of law, that the patentees spoke clearly enough to cancel the jury's finding of infringement.

The presumptions adopted in *Warner-Jenkinson* and *Festo* do nothing to help Toyota. Those presumptions against the application of the doctrine of equivalents apply only when an applicant has already clearly surrendered subject matter by the give and take process of rejection followed by a narrowing amendment of the claims during prosecution. The degree of surrender there is plain—*i.e.*, it is the difference between the scope of the claims before and after the rejection and amendment. As a result, it makes perfect sense to shift the burden to the patentee to explain why the plain surrender was for some innocent reason (*Warner-Jenkinson*) or should be anything less than absolute (*Festo*). Here, in contrast, the entire question is whether there has been any surrender at all, and the burden rightly falls on the party advocating a surrender to produce evidence.

Indeed, it is Toyota's presumption that is backward, because Toyota would require a patentee to prove a negative—that it did not disavow subject matter. Seldom is it appropriate to place such a burden on any party, "since as a practical matter it is never easy to prove a negative." *Elkins v. United States*,

364 U.S. 206, 218 (1960); *see also Walther v. Sec'y of HHS*, 485 F.3d 1146, 1150 (Fed. Cir. 2007) ("[O]ur legal system rarely requires a party to prove a negative."); *Brush v. Ofc. of Personnel Mgmt.*, 982 F.2d 1554, 1561 (Fed. Cir. 1992) (holding governmental agency, and not individual, bore burden of proving notice was actually sent: "The burden can not be upon [Toyota] in the first instance to prove a negative.").

This Court, in fact, carefully balanced the competing considerations surrounding the doctrine of equivalents in *Warner-Jenkinson*, and found the "all elements" rule to be sufficient in preventing improper expansion of the doctrine. Toyota supplies no reason to add yet another limit to the doctrine, and there is no support for such a new limit in any case law.

In short, Toyota does not cite a single reference—whether from this Court, from any appellate panel or judge, from any district court, or from industry, the government, or academia—that identifies a problem with the Federal Circuit's approach here. That is because the approach is fully logical, and requires nothing more than that a party provide some clarity in the evidence for its proffered arguments.

C. The Appellate Court's Decision Was Proper Under Any Standard

Regardless of the level of clarity needed to show a disavowal, this is not the case in which to address the issue because Toyota did not come even close to demonstrating a disavowal of subject matter in the

patent. In short, these facts do not provide a clear basis for this Court to establish any rule.

Toyota frames the issue here as involving a choice between requiring clear disavowals (which Toyota describes as the Federal Circuit's approach), and reading the patent according to the way a skilled artisan would read it (what Toyota identifies as its position).The distinction is false, however, because the Federal Circuit here did analyze the issue from the eyes of a skilled artisan reading the patent—just as it has in all of its disavowal cases. *Wang Labs.*, 197 F.3d at 1383-84 (finding a disavowal after looking to the understanding of a "person of skill in this field reading" the patent file); *Vehicular Technologies*, 212 F.3d at 1382 (finding a disavowal after looking to how "inventors and artisans of ordinary skill" would interpret the patent); *see also Moba*, 325 F.3d at 1315 ("Moreover, as this court has repeatedly counseled, the best indicator of claim meaning is its usage in context as understood by one of skill in the art at the time of invention."). Toyota apparently believes that the lack of an explicit reference to an "artisan of ordinary skill" means the Federal Circuit abandoned its longheld test just for this case, but there is no basis for such a conclusion.

Petitioner also suggests wrongly that the Federal Circuit lacks a legal framework for limiting the doctrine of equivalents based on specification statements. Petitioner itself urged that the Federal Circuit overturn the jury verdict based on a string of cases that hold that clear statements in the specification actually linked to a claim limitation may be used to limit the scope of equivalents for that limita-

tion. *SciMed Life Sys., Inc. v. Advanced Cardiovascular Sys., Inc.*, 242 F.3d 1337 (Fed. Cir. 2001); *Gaus v. Conair*, 363 F.3d 1284 (Fed. Cir. 2004); *Dawn Equip. Co. v. Kentucky Farms, Inc.*, 140 F.3d 1009 (Fed. Cir. 1998). The Federal Circuit did not repudiate its legal standard, but instead simply found that Petitioner did not meet the standard.

Toyota lost because, in the Federal Circuit's words, Toyota's best evidence was "equivocal at best." Pet. App. 35. In a self-serving twist of the facts, Toyota reads this statement as an admission that the patent contained "vague language," was "less than clear in its disclosure," was "susceptible to multiple interpretations," and that the patent explicitly told the world what it did not embrace. Toyota Pet. at 2, 4, 5. Indeed, Toyota frames its main issue on appeal as being whether a patentee can recapture the same subject matter he or she criticized in the patent. Nothing could be further from the truth—the patent was very clear about what it did and did not cover; it was the evidence supporting Toyota's argument that the court (and presumably, the jury) found to be equivocal at best.

This is simply not a case in which the result could be in doubt, especially since the Federal Circuit's standard test focuses on whether a skilled artisan would have found a disavowal in the patent—the same test advocated by Toyota.

CONCLUSION

For the foregoing reasons, Paice respectfully requests that the Court deny Toyota's petition for a writ of certiorari.

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APPENDIX

APPENDIX A

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRUCT OF TEXAS
MARSHALL DIVISION

Case No. 2:04-CV-211-DF

PAICE LLC,
Plaintiff,

v.

TOYOTA MOTOR CORPORATION,
TOYOTA MOTOR NORTH AMERICA, INC.,
AND TOYOTA MOTOR SALES, U.S.A., INC.
Defendants.

EXCERPTS FROM CLAIM CONSTRUCTION ORDER CONSTRUING U.S. PATENT NOS. 5,343,970, 6,209,672, & 6,554,088

(Filed on September 28, 2005)

* * * * *

C. "controllable torque transfer unit"

The claim term "controllable toque transfer unit" first appears in claim 1 of the '970 patent and then is used throughout the asserted claims. Paice argues that the term should be construed as "a multi-input device or component that is controlled to transfer variable amounts of torque." P. Br. at 13, citing '970 patent at 10:24-30; Claim Construction Hr. Tr. at 17-22; Paice Claim Construction Slide 16.

Toyota argues that the claim term is void of adequate structure because the only recited noun, "unit," fails to denote structure and because one of ordinary skill in the art would not generally understand the term to have a structural meaning. Toyota's Opening Br., Dkt. No. 22, at 8 ("T. Br."); T. Resp. Br. at 5-7; Claim Construction Hr. Tr. 55-67. Therefore, the term must be construed under the requirements of 35 U.S.C. §112, ¶6. T. Br. at 8-9.

Toyota argues that the recited functions for this term, are "receiv[ing] torque from two sources [] and transmit[ing] said torque to drive wheels of said vehicle; (b) between said input shafts; and from said output member to one or both of said input shafts" in claims 15 and 32. In support of the recited functions in claims 1, 7, and 11, Toyota cites the '970 patent at 24:42-48 and 26:40-46. T. Br. at 9-10. Toyota then identifies the corresponding structure as: "[f]our constantly-meshing bevel gears, housing having teeth formed on its outer circumference, and locking devices of Fig. 11 of the '970 patent when used to controllably transfer torque and the equivalents of

this disclosed structure." T. Br. at 9-10, citing the '970 patent, 15:32-63 and Figure 11.

Paice responds that the term does not invoke the "means-plus-function" requirements of §112, ¶6 because those of skill in the art at that time of the invention would understand this term as structure, P. Resp. Br. at 3-4. Paice also points out that the claim does not include the term "means" and notes that there is a strong presumption against invoking the §112, ¶6 requirements absent this term. *Id.* Toyota, Paice argues, has not overcome that strong presumption.

Toyota argues that Paice fails to demonstrate that the term is structural – and that Paice merely seeks to import limitations from the specification into the claim language. T. Resp. Br. at 5. Paice's attempts to have the Court construe "unit" broadly enough "to cover every conceivable way or means for controlling the transfer of torque" must fail, argues Toyota. T. Resp. Br. at 6, citing *Mas-Hamilton Group v. LaGard, Inc.*, 156 F.3d 1206 (Fed. Cir. 1998). Thus the term should be construed as invoking the requirements of §112, ¶6 and construed as Toyota proposes.

The term "controllable torque transfer unit" is used both in the patent claims and specification as indicative of structure. As the word "means" is not recited in the claim term, Toyota bears the burden to demonstrate, by clear and convincing evidence, that the claim term is insufficient to connote structure to one of skill in the art at the time of the invention if it is to be construed as a means-plus-function term. Merely defining a claim term with functional

language is insufficient to invoice §112, ¶6 requirements. *Greenberg*, 91 F.3d at 1583. It is a rare case where a claim term not including the word "means" is found to be a means-plus-function limitation. *See Lighting World, Inc. v. Birchwood Lighting, Inc.*, 382 F.3d 354, 1362 (Fed. Cir. 2004) (noting that *Mas-Hamilton* is the only post-*Greenberg* case in which a claim term not using the word "means" was properly construed as a means-plus-function term).

Toyota has presented only attorney argument in an effort to overcome the presumption. In doing so, it falls short of its burden. In support of its efforts, Toyota cited the *Mas-Hamilton Group v. LaGard, Inc.* wherein the term "leaver moving element" was construed under the means-plus-function provisions. There, the Federal Circuit upheld this construction finding that the district court properly construed that one of skill in the art would not generally understand the term as structure. 156 F.3d at 1213. Toyota has presented no evidence in this case, however, from which this Court can draw such a conclusion for the term "controllable torque transfer unit."

For these reasons, the claim term **"controllable torque transfer unit"** is defined as **"a multi-input device or component that is controlled to transfer variable amounts of torque [rotary force]."**

D. "input shafts"

The term "input shafts" appears throughout the claims of the '970 patent. Though the parties initially disagreed regarding the appropriate

construction of the term, P. Br. at 13-14, P. Resp. Br. at 4-5, T. Resp Br. at 8, they now agree that the term should be construed as: "the mechanical components that transfer torque between the engine and motor, respectively, and the controllable torque transfer unit." 5/4/05 Letter.

The Court finds that this definition is consistent with the use of the term in the patent and therefore will construe the term **"input shafts"** as **"the mechanical components that transfer torque between the engine and motor, respectively, and the controllable torque transfer unit."**

E. "a controller for controlling the operation of ...and for controlling the relative contributions of..."

This claim term appears in claims 1 and 2 of the '970 patent. Paice argues that the term should be construed as "a computerized control device." P. Br. at 14, citing the '970 patent, 10:4-5 and Figure 3; P. Br. at 5. Toyota initially offered a construction requiring the invocation of §112, ¶6, T. Br. at 10 T. Resp Br. at 8-10, but has since

predetermined value of its maximum torque output" as "Selecting an operating mode in which the engine is operated only when the load on the engine's exceeds a predetermined amount of the engine's maximum torque [rotary force] output."

V. Conclusion

Accordingly, the Court hereby ORDERS the disputed claim terms construed consistent herewith.

SIGNED this 28th day of September, 2005.

___s/ Hon. David Folsom__
DAVID FOLSOM
UNITED STATES DISTRICT JUDGE

APPENDIX B

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHAL DIVISION

PAICE, LLC	*	**Civil Docket No.**
VS.	*	**2:04-CV-211**
TOYOTA MOTOR	*	**Marshall, Texas**
CORPORATION, TOYOTA	*	
MOTOR NORTH AMERICA,	*	**Dec. 7, 2005**
INC., and TOYOTA MOTOR	*	
SALES, USA, INC.	*	**9:00 A.M.**

TRANSCRIPT OF TRIAL
BEFORE THE HONORABLE DAVID FOLSOM
UNITED STATES DISTRICT JUDGE
AND A JURY

* * * * *

[40] MR. CORDELL: Thank you, Your Honor. Plaintiff calls Dr. Alex Severinsky.

THE COURT: If you will please be sworn.

ALEX SEVERINSKY, PLAINTIFF'S WITNESS, SWORN

DIRECT EXAMINATION BY MR. CORDELL:

[40] Q. And, I mean, Dr. Severinsky, did all of colleagues agree with you that making a car with 500 volts under the hood was a good idea?

[41] A. No. This was very difficult to do – for the industry.

Q. Why is that?

A. We presented this to many automobile makers, and General Motors and Ford rejected it outright saying that they just can't use voltages in that range in their automobiles.

Q. Well, were you worried about safety? I mean it seems like 500 volts is a lot of voltage.

A. Safety, of course, for engineers our concern is a matter of design. We have to design for safety. You have to. So, using a low currents like 50 and 75 amps and disconnect devices helps safety because the voltage design, when accident happened, it's possible to disconnect in case of emergency, in case of service.

* * * * * *

[48] Q. Thank you. All right. Now, Dr. Severinsky, I'd like to go back and talk a little bit about your efforts to get other companies to work with Paice to commercialize your technology. Will that be all right?

A. Yes, sir.

Q. I think you said earlier that you established Paice sometime in around the filing of the '970 patent; is that right?

A. Yes, sir.

Q. So after you established it, what did you do?

A. As I said, at the time our objective was to commercialize now the invention. And the first step in the process was I applied for acceptance into the

[49] incubator program of the University of Maryland.

Q. And were you accepted by the University of Maryland?

A. Yes, sir.

Q. Tell the jury a little bit about what the incubator program is at the University of Maryland?

A. The University of Maryland offers a program for start-up companies where the university will provide mainly its reputation and the connections of their faculty to the business and technical community to assist the company to

develop its technology. This was the main contribution of the University of Maryland.

* * * * *

APPENDIX C

IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHAL DIVISION

PAICE, LLC	*	**Civil Docket No.**
VS.	*	**2:04-CV-211**
TOYOTA MOTOR	*	**Marshall, Texas**
CORPORATION, TOYOTA	*	
MOTOR NORTH AMERICA,	*	**Dec. 7, 2005**
INC., and TOYOTA MOTOR	*	
SALES, USA, INC.	*	**1:30 P.M.**

TRANSCRIPT OF TRIAL
BEFORE THE HONORABLE DAVID FOLSOM
UNITED STATES DISTRICT JUDGE
AND A JURY

* * * * *

[40] MR. CORDELL: Thank you, Your Honor. Plaintiff calls Dr. Steven P. Nichols.

THE COURT: If you will please be sworn.

STEVEN P. NICHOLS, PLAINTIFF'S WITNESS, SWORN

DIRECT EXAMINATION BY MR. DAVIS:

[114] Q. Dr. Nichols, could you summarize for us how that is that the planetary gear unit that you've disassembled for us acts as a [CTTU], within the meaning of the '970 patent?

A. Sure. Let's use this one. It allows . . . the computer to control variable amounts of torque output and control the sources from which that torque comes. So, as an example. If the automobile is standing still, we got in this morning, we turned it on, the computer decides the battery is low, it will turn MG1 that starts the engine. At the same time in order [that] the car didn't lurch forward, they lock the planetary gear unit by using MG1-MG2 to lock it. You can run this with — after you start the engine, by the way, the engine is running, you see MG1 turning, your driving power, none of that energy is getting to the wheels right now . . . . So, you can choose your source of power, you can choose

[115] your flow of torque and without getting into too fine a hair on the definition of controllable torque transfer unit, I think we will look at that later, I think that will come into play as we close that out.

* * * * *

APPENDIX D

Letter from PAICE/LMCS – HEV Program to Mr. Fujio Cho, President of the Toyota Motor Company

March 06, 2000

Dear Mr. Cho,

This letter is intended to introduce you to recent hybrid electric vehicle drive system developments that have been made by PAICE and Lockheed Martin Control Systems. Our Patented technology has demonstrated substantial improvements over currently available hybrid systems. A proof of concept system has been under test for several months at Roush Technologies in Detroit. This dynamometer testing can demonstrate performance of vehicles weighing 3000lbs. to 4500lbs. Development is ongoing and further improvements are planned. However, the preliminary test results are so impressive that we would like to share them with you.

* * * * *

The next step in our plan is to develop a SUV/Truck with this drive concept. We invite your company to join us in this program. As a first step, we suggest a meeting with your executives in Detroit at the Roush laboratories where the PAICE drive system is available for demonstration and explanation of its

functions. Please let us know if this is of interest and we will make appropriate arrangements.

Sincerely,

s/ Alex Severinsky, Ph.D of PAICE

and

s/ James D. Scanion
s/ James F. Gerwein both of Lockheed Martin Control Systems

APPENDIX E

Letter from Toyota Motor Corporation to Mr. Ted Louckes of PAICE Corporation

24 March 2000

Dear Mr. Louckes,

Thank you very much for your kind and informative letter, dated 6 March 2000, sent to President Cho regarding the possibility of Toyota Motor Corporation's involvement in your new hybrid SUV/Truck program. In my capacity as head of TMC's hybrid systems development team, it has fallen to me to respond to your kind proposal.

As I am sure you can appreciate, at TMC we are very proud of the fact that we have gained such a broad variety of experience to date in the hybrid field, not only by introducing the Prius itself to the market, but also introducing the hybrid systems and various high voltage parts into the Japanese market. We have also managed to prove that the Toyota Hybrid System, the hybrid system which drives the Prius, is truly something that can be popularized in the market today.

Of course, we are delighted at our success in achieving the worlds first mass produced hybrid vehicles, but it is also our sincere wish that hybrid development continues and progress throughout the world. In is our firm belief that many types of

hybrid systems are possible, and it goes without saying that development in all areas of hybrid must continue consistently. I have no doubt that you high expectations for the development of hybrid systems at PAICE, and I am sure that there will be extensive interest in your work.

However, I must inform you that TMC is currently aiming at the further development of TMC original technologies, and for this reason, we must decline your kind offer to join the program at this time, as we pursue our own development program. I trust you can appreciate out position on this.

I have no doubt that there will be occasion in the future when we will have the opportunity to meet, at lectures, conferences and so on. I look forward very much to having the pleasure of meeting you, and to being able to discuss HV technologies and their advancement on that occasion.

Once again, thank you very much for your interest TMC.

Sincerely,

s/ Takehisu Yaegashi, PhD. of Toyota Motor Company

* * * * *

APPENDIX F

Letter from PAICE Corporation to Mr. Fujio Cho of Toyota Motor Company

June 20, 2003

Dear President Cho:

Over the past few years, we at Paice Corporation have exchanged correspondence with you and several other senior officials of your company, relating to the possibility of Toyota's using Paice's patented hybrid electric vehicle technology.

For example, in March 2000, we suggested working with Toyota on a program to develop a SUV/Truck. We later provided copies of our US patent nos. 5,343,970 and 6,209,672 to Dr. Yaegashi in May 2001. Copies of our letters to you and to Dr. Yaegashi, along with his responses to both letters and copies of our first two patents are enclosed herewith for your convenience.

We are now pleased to advise you that PAICE has been granted two further US patents for our hybrid vehicle technology, nos. 6,338,391 and 6,554,088. Copies of these patents are enclosed as well. Additional US and foreign patents are also pending.

We remain convinced that Paice's patented HEV technology is the most economical solution to

the complex problem of optimizing a hybrid vehicle, and we again invite your company to consider licensing these patents. Included in this offer is the offer to share with you company Paice's extensive technical knowledge and expertise n the hybrid vehicle field as it relates to the cost and performance advantages of our HEV system in relation to other HEV technologies.

We would welcome the opportunity to discuss these matters with Toyota, and hope to hear from you soon.

Very truly yours,

s/ Ted Louckes of PAICE Corporation

* * * * *

APPENDIX G

Letter from Toyota Motor Company to Ted Louckes of PAICE Corporation

25 May 2001

Dear Mr. Louckes,

Thank you very much for your correspondence dated 11 May 2001, kindly inviting Toyota to consider working together with PAICE to further develop Hybrid electric drive technology. I strongly believe that both PAICE and Toyota have made great developments in the hybrid field.

We at Toyota, in the same way as the members of PAICE, understand the extreme impact that the hybrid system is having on the automobile market at present, and most definitely in the future. The introduction of the Toyota hybrid system into the market was the first of many anticipated breakthroughs that we are working towards, therefore it is with every new day that a new development is made.

Being involved in the fast moving technological world that we live in, particularly in the hybrid market, we were most delighted that you considers us to become involved with you in your developments. At this stage, we are unable to accept your kind invitation to share ideas, and we have no

intentions of developing technology with your patents, since we are currently aiming at developing our own technology. I hope that you are understanding towards this decision.

I have no doubt that there will be opportunities to meet with you in the future, whenever you are in Japan. I look forward to whenever this opportunity arises.

Once again, thank you very much for your kind invitation.

Yours sincerely,

s/ Takehisa Yaegashi of Toyota Motor Company

* * * * *

APPENDIX H

TOYOTA ENVIRONMENTAL & SOCIAL REPORT 2004

COMPLETE REEVALUTATION OF THE POWERTRAIN

In order to improve the driving performance of the Prius, its powertrain was completely redesigned. In the case of the new Prius, by starting again from scratch, we were aiming at a substantial improvement in driving performance. After examining various data, such as engine size, battery capacity, and output, we made a decision to go with a new main system called THS II (Toyota Hybrid System II). The major improvements made by THS II were the adoption of a high-voltage power-control system for the motor drive voltage and enhancement of the system's potential by improving the performance of the engine, the motor, and the generator, and by increasing the regeneration capacity, etc.

The adoption of a high-voltage power-control system was the key. A method of increasing motor output by increasing voltage is nothing new. As a matter of fact, such a method is routinely used in industrial machines and trains. However, even though the development team knew that such a technology existed, the idea of incorporating it into an automobile did not easily occur to them. First of all, the system itself would take up a substantial

amount of space and secondly, there was no prior example of applying this particular method to a motor that switches between output and power generation at such a dizzying pace. In other words, while adoption of a high-voltage power-control system could expand the potential of hybrid vehicles, it could also pose many challenging and unpredictable problems.

Although the development team members knew that a high-voltage power-control system would improve performance, they were not sure whether they could develop a system that would fit in the limited space of a motor vehicle. This point was hotly debated during many meetings.

In the end we decided to adopt an improved method that centered on a high-voltage power-control system. However, this was a huge challenge for the development team, who feared that it might be forced to change its direction at an early stage of development.

Once the development of the high-voltage power circuit began, there was a mountain of problems. There was no such thing as a ready-made high-voltage power circuit system for installation in automobiles. There were many problems that had to be overcome, such as what to do about the heat generated by increased voltage and the noise generated. Since there were no commercially available products, we had to make one ourselves from scratch. The fact that Toyota had been making a wide range of electronic components including for switching elements, worked to our advantage in this case. For example, although a part called a "reactor"

is essential for a high-voltage power circuit, there were no products small enough to be used in automobiles. Shigenori Hori (current Executive Chief Engineer for the Prius) says that without Toyota's internal expertise in producing electronic components, his team would never have been able to develop such a compact product and make mass-production feasible.

* * * * *

APPENDIX I

Email String Between Alex Severinsky of PAICE Corporation and Toshifumi Takaoka of Toyota Motor Corporation Regarding the Hyperdrive Offer to Toyota

Wednesday, June 19, 2002

Dear Severinsky-San,

My name is Takaoka and I am in charge of the engine for hybrid system, and the author of the paper which Nakamura-san sent to you.
We appreciate your paper and offer, and your Hyperdrive system has excellent performance in some aspects.
But we would like you to wait our reply for several days because we need a discussion time in Toyota.

Sincerely,
Toshifumi Takaoka

* * * * *

Mon., 17 Jun 2002

Dear Nakamura-san

Thank you for your reply.

For your information, our HEV technology is quite opposite to your Prius.

We are very familiar with your Prius technology as we did extensive work for other automakers comparing Prius technology and ours for application to SUV's .

Our technology is materially improving the SUV performance, especially with full trailer load capability on long climbs, but Prius fails alltogether.

To show the difference, I offer you a challenge. Let's select and SUV or a light truck, define all driving specifications and existing fuel economy on whatever driving cycle. Then both comanies, Toyota and PAICE, will design its technology into this vehicle and present to each other performance, fuel economy, size, weight, and cost of all components, specifically incremental cost in 100,000 units annually. For your information, we have on staff one of the best cost analysts in Detroit.

After studying each other results, let's get together, engineer-to-egineer, and define pros and cons of each technology and areas of application.

Would your company take this challenge?

Sincerely,

Alex Severinsky,

* * * * *

Monday, June 17, 2002

Dear Alex Severinsky

Thank you very much for sending me copy of your presentations at Future car, congress.
As you know we introduced our Hybrid Vehicle Prius into the U.S Market.
We are pleased that your idea are pretly similar to our technology.
I well send you some paper about our prius for your reference.
So, I am soryy that I don't feel it usefull to have discussions about this

Nakamura

APPENDIX J

Letter from PAICE Corporation to Takehisa Yaegashi at Toyota Motor Corporation

May 11, 2001

Dear Dr. Yaegashi:

Last year we exchanged correspondence in which we sent you some information about the work on the hybrid electric vehicle drive systems conducted by PAICE Corporation.

We have reviewed many of your patents and appreciate the effort that you, as head of Toyota Motor Corporation's hybrid system development team, and TMC have put into developing your hybrid system. We also appreciate the credit you have given us by citing our patents in your patent applications. As you mentioned, TMC believes that many types of hybrid systems are possible and that development sin all areas of hybrid systems must continue to develop constantly. Recently, the United States Patent and Trademark Office granted patent number 6,209,672 to PAICE Corporation on April 3, 2001, a copy of which is enclosed. PAICE is actively seeking to commercialize this patent and PAICE's earlier patent, 5,343,970. I know you can support the wisdom of strong international patent protection for cutting edge technologies such as ours. As such, we are in the process of filing patent applications on

our technology throughout the world including in Japan and here in the United States.

I understand that TMC is currently aiming to further develop your own technologies and programs. However, I believe that the PAICE hybrid system has many advantages that would be useful for you to consider. I hope that we can have the opportunity to meet and discuss the PAICE approach to hybrids and suggest that we meet wither the next time I am in Japan or when you next come to America.

Sincerely,

s/ Ted Louckes

* * * * *

APPENDIX K

AUTOTECHNOLOGY
International Magazine for Engineering, Production and Management Special Publication on the Toyota Prius Hybrid Synergy Drive

In order to pro-actively take up measures to address global environmental problems and to make an epoch-making leap from the continuation of existing technologies, the tough target of a proposed concept vehicle with 100% improved fuel economy, i.e. 50% lower fuel consumption, was set. Moreover, this target was set not just for a research test vehicle, but for an actual mass production vehicle. In order to achieve this target, there was no other means than to pursue hybrid technology to combine existing conventional engines and transmission, the desire to fully pursue the fuel consumption challenge led to a completely new concept of the hybrid system – the Toyota Hybrid System (THS). Only in November 1994 the decision to design a hybrid concept care for the 1995 Tokyo Motor Show was taken. Using the G21 project as a launch pad, a mass production development project for a hybrid vehicle was initiation at the end of 1995.

Mass Production

For the first mass production hybrid model, the name Prius was chosen in order to express the spirit of "leading the 21st century." By the end of 1997, the

Prius was launched successfully on the Japanese market as the first mass-produced hybrid vehicle. Figure 2.

* * * * *